IN THE CLAIMS

Please amend the claims as follows:

1. Cancel.

2. Cancel.

3. Cancel.

4. (Original) A method for generating pilot estimates indicative of characteristics of a communication link, comprising:

receiving samples corresponding to pilot symbols and non-pilot symbols;

weighting samples corresponding to pilot symbols in accordance with a first set of one or more coefficients to provide first weighted samples;

weighting samples corresponding to non-pilot symbols in accordance with a second set of one or more coefficients to provide second weighted samples; and

generating the pilot estimates based on the first and second weighted samples.

5. (Original) The method of claim 4, further comprising:

updating the one or more coefficients in the second set based on the samples corresponding to non-pilot symbols.

6. (Original) The method of claim 5, wherein the one or more coefficients in the second set are updated further based on the pilot estimates.

7. (Original) The method of claim 6, wherein the one or more coefficients in the second set are updated further based on a value indicative of the quality of the samples used to update the coefficients.

8. (Original) The method of claim 6, wherein the one or more coefficients in the second set are updated further based on a value indicative of a signal-to-noise-plus-interference ratio (SNR) of the samples used to update the coefficients.

9. (Original) The method of claim 7, wherein the coefficients in the second set are updated to larger values if the quality of the samples is high, and to lower values if the quality of the samples is low.

10. (Original) The method of claim 4, wherein the one or more coefficients in the second set are updated as:

$$\tanh\left(\frac{1}{\sigma^2}\mathrm{Re}\left\{f_{k-1}y_l^*\right\}\right),$$

where f_{k-1} is the pilot estimate for a prior time instance k-1, y_l are samples corresponding to non-pilot symbols, and $1/\sigma^2$ is representative of the quality of the samples used to update the coefficients.

11. (Original) The method of claim 10, wherein the tanh function is approximated with a piece-wise linear function.

12. (Original) The method of claim 10, wherein the term $1/\sigma^2$ is approximated with a constant.

13. (Original) The method of claim 4, wherein the coefficients in the first and second set are quantized to L bits, where L is 5 or less.

14. (Original) The method of claim 4, wherein the coefficients in the second set have magnitude equal to or less than the magnitude of the coefficients in the first set.

15. (Original) The method of claim 4, wherein the coefficients in the first set have equal magnitude.

16. (Original) The method of claim 4, wherein the pilot and non-pilot symbols are time-division multiplexed in a CDMA data transmission.

17. (Original) The method of claim 16, wherein the CDMA data transmission conforms to W-CDMA standard.

18. (Original) A pilot filter in a wireless communication system, comprising:

one or more multipliers configured to receive and weigh samples corresponding to pilot symbols with one or more first coefficients to provide first weighted samples, and to receive and weigh samples corresponding to non-pilot symbols with one or more second coefficients to provide second weighted samples; and

a summer coupled to the one or more multipliers and configured to receive and combined the first and second weighted samples to provide pilot estimates.

19. (Original) The pilot filter of claim 18, further comprising:

a coefficient adjustment unit configured to receive the samples corresponding to the non-pilot symbols and the pilot estimates, and to update the one or more second coefficients based on the received samples and pilot estimates.

20. (Original) The pilot filter of claim 19, wherein the coefficient adjustment unit is further configured to update the one or more second coefficients based on the quality of the samples used to update the coefficients.

21. (Original) The pilot filter of claim 18, and implemented with a finite impulse response (FIR) filter structure.

22. (Original) The pilot filter of claim 18, and implemented with an infinite impulse response (IIR) filter structure.

23. (Original) The pilot filter of claim 18, wherein the first and second coefficients are quantized to L bits, where L is 5 or less.

24. (Original) The pilot filter of claim 18, wherein the samples corresponding to pilot and non-pilot symbols are derived from a CDMA data transmission.

25. (Original) A rake receiver in a wireless communication system, comprising:

a plurality of finger processors, each finger processor configurable to process a respective instance of a received signal, each finger processor further including

a despreader configured to receive and despread digitized samples in accordance with one or more pseudo-noise (PN) sequences to provide despread samples,

a first processor coupled to the despreader and configured to receive and process the despread samples to provide first samples,

a second processor coupled to the despreader and configured to receive and process the despread samples to provide second samples,

a pilot filter coupled to the second processor and configured to receive and filter the second samples to provide pilot estimates, wherein the pilot filter is further configured to weigh samples corresponding to pilot symbols with a first set of one or more weights and to weigh samples corresponding to non-pilot symbols with a second set of one or more weights, and

a pilot demodulator coupled to the first processor and the pilot filter and configured to receive and demodulate the first samples with the pilot estimates to provide recovered symbols.